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E1 2 SESSLER HELENE/AU
E2 3 SESSLER I/AU
E3 5 --> SESSLER J/AU
E4 1 SESSLER J C/AU
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E6 26 SESSLER J L/AU
E7 1 SESSLER JANATHAN/AU
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E12 2 SESSLER JONATHAN/AU

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E13 271 SESSLER JONATHAN L/AU
E14 1 SESSLER JONATHAN LAWRENCE/AU
E15 1 SESSLER M/AU
E16 2 SESSLER M J/AU
E17 1 SESSLER MARGOT/AU
E18 1 SESSLER MAVRO/AU
E19 2 SESSLER MICHAEL J/AU
E20 1 SESSLER MICHAEL JOSEPH/AU
E21 1 SESSLER N/AU
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E24 1 SESSLER R E/AU

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5 "SESSLER J"/AU
26 "SESSLER J L"/AU
1 "SESSLER JOHNATHAN L"/AU
2 "SESSLER JONATHAN"/AU
1 "SESSLER JONATHAN LAWRENCE"/AU

L1 35 "SESSLER J"/AU OR "SESSLER J L"/AU OR "SESSLER JOHNATHAN L"/AU OR "SESSLER JONATHAN"/AU OR "SESSLER JONATHAN LAWRENCE"/AU

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271 "SESSLER JONATHAN L"/AU
L2 306 L1 OR "SESSLER JONATHAN L"/AU

=> s l2 and radiation
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L3 27 L2 AND RADIATION

=> d bib

L3 ANSWER 1 OF 27 CA COPYRIGHT 2002 ACS
AN 136:334128 CA
TI Texaphyrins: synthesis and development of a novel class of therapeutic agents
AU Mody, Tarak D.; Fu, Lei; ***Sessler, Jonathan L.***
CS Pharmacyclics, Inc., Sunnyvale, CA, USA
SO Progress in Inorganic Chemistry (2001), 49, 551-598
CODEN: PIOCAR; ISSN: 0079-6379
PB John Wiley & Sons, Inc.
DT Journal; General Review
LA English
RE.CNT 161 THERE ARE 161 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> e darren m/au
E1 1 DARRELL VAN CAMPEN/AU
E2 1 DARRELMANN K GR/AU
E3 0 --> DARREN M/AU
E4 1 DARREN STUART J/AU
E5 1 DARRES MICHEL/AU
E6 1 DARRET DANIELE/AU
E7 1 DARRET DANIELLE/AU
E8 1 DARRET GEORGES/AU
E9 1 DARREYE ANGELINA/AU
E10 1 DARRIBERE C/AU
E11 4 DARRIBERE CYRIL/AU
E12 6 DARRIBERE T/AU

=> d l3 bib ab 1-27

L3 ANSWER 1 OF 27 CA COPYRIGHT 2002 ACS
AN 136:334128 CA
TI Texaphyrins: synthesis and development of a novel class of therapeutic agents
AU Mody, Tarak D.; Fu, Lei; ***Sessler, Jonathan L.***
CS Pharmacyclics, Inc., Sunnyvale, CA, USA
SO Progress in Inorganic Chemistry (2001), 49, 551-598
CODEN: PIOCAR; ISSN: 0079-6379
PB John Wiley & Sons, Inc.
DT Journal; General Review
LA English
AB A review of texaphyrin prepn., metallotexaphyrin chem., their use as PDT agents and their use as MRI detectable ***radiation*** enhancers.
RE.CNT 161 THERE ARE 161 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 2 OF 27 CA COPYRIGHT 2002 ACS
AN 135:285062 CA
TI Probing the reactivity of the ***radiation*** sensitizer motexafin gadolinium (Xcytrin) and a series of lanthanide(III) analogues in the presence of both hydroxyl radicals and aqueous electrons
AU ***Sessler, Jonathan L.*** ; Tvermoes, Nicolai A.; Guldi, Dirk M.; Mody, Tarak D.
CS Department of Chemistry and Biochemistry, University of Texas at Austin, Austin, TX, 78712, USA
SO Journal of Porphyrins and Phthalocyanines (2001), 5(7), 593-599
CODEN: JPPHFZ; ISSN: 1088-4246
PB John Wiley & Sons Ltd.
DT Journal
LA English
AB The competition of the ***radiation*** sensitizer motexafin gadolinium (Xcytrin, gadolinium(III) texaphyrin) and several other water-sol. metallotexaphyrin complexes with N,N,N',N'-tetramethyl-p-phenylenediamine (TMPD) for solvated electrons and hydroxyl radicals was studied using pulse radiolysis and by steady-state .gamma.-radiolysis. It was found that the one-electron reduced forms (M-Tex.bul.+) of the Gd(III), Eu(III), Dy(III), Yb(III), and Cd(II) texaphyrin complexes, after an initial reaction with hydrated electrons, do not compete with TMPD for hydroxyl radicals formed under pulse radiolytic conditions. By contrast, the reduced Y(III), In(III), Tm(III), and Lu(III) texaphyrin complexes do. These differences in competitive reactivity toward OH are rationalized in terms of the relative rates of protonation of the various singly reduced

texaphyrins. In the case of Gd-Tex2+ in particular, the one-electron reduced product, Gd-Tex.bul.+, protonates rapidly, producing a redox-inactive species that does not react appreciably with OH. By contrast, the one-electron reduced product from, e.g., Lu-Tex2+ (motexafin lutetium), does. These results may explain, at least in part, why the Gd(III) texaphyrin functions as a ***radiation*** sensitizer in vivo, while the analogous Lu(III) complex does not.

RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 3 OF 27 CA COPYRIGHT 2002 ACS
AN 134:357565 CA
TI Methods and compositions for treating atheroma, tumors and other neoplastic tissue
IN ***Sessler, Jonathan L.*** ; Madga, Darren
PA Pharmacyclics, Inc., USA; The University of Texas System
SO PCT Int. Appl., 74 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2001032210	A2	20010510	WO 2000-US29515	20001027
WO 2001032210	A3	20020207		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRAI US 1999-430505 A2 19991029
AB The ***radiation*** sensitization potential of a candidate compd. can be screened by detg. its ability to generate one or more reactive oxygen species under appropriate conditions. Compds. detd. to have ***radiation*** sensitization potential are employed in methods for treating atheroma, tumors and other neoplastic tissue as well as other conditions that are typically responsive to ***radiation*** sensitization. Cytotoxic effect of gadolinium complex of texaphyrin and ionizing ***radiation*** , with and without L-buthionine sulfoximine

cultured MES-SA human uterine cells was studied. A tablet contained active ingredients 25.0, microcryst. cellulose 200.0, colloidal silicone dioxide 10.0, and stearic acid 5.o mg.

L3 ANSWER 4 OF 27 CA COPYRIGHT 2002 ACS
AN 134:277412 CA
TI Texaphyrins: a new approach to drug development
AU Mody, Tarak D.; ***Sessler, Jonathan L.***
CS Pharmacyclics, Inc., Sunnyvale, CA, 94085, USA
SO Journal of Porphyrins and Phthalocyanines (2001), 5(2), 134-142
CODEN: JPPHFZ; ISSN: 1088-4246
PB John Wiley & Sons Ltd.
DT Journal; General Review
LA English
AB A review with 88 refs. The texaphyrins are prototypical metal-coordinating expanded porphyrins. They represent a burgeoning class of pharmacol. agents that show promise for an array of medical applications. Currently, two different water-sol. lanthanide texaphyrins, namely motexafin gadolinium (Gd-Tex, 1) and motexafin lutetium (Lu-Tex, 2), are involved in multi-center clin. trials for a variety of indications. The first of these agents, XCYTRIN (motexafin gadolinium) injection, is being evaluated as a potential X-ray ***radiation*** enhancer in a randomized Phase III clin. trial in patients with brain metastases. The second, in various formulations, is being evaluated as a photosensitizer for use in: (i) the photodynamic treatment of recurrent breast cancer (LUTRIN Injection; now in Phase IIb clin. trials); (ii) photoangioplastic redn. of atherosclerosis involving peripheral and coronary arteries (ANTRIN Injection; now in Phase II and Phase I clin. trials, resp.); and (iii) light-based age-related macular degeneration (OPTRIN Injection; currently under Phase II clin. evaluation), a vision-threatening disease of the retina. In this article, these developments, along with fundamental aspects of the underlying chem. are reviewed.
RE.CNT 88 THERE ARE 88 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 5 OF 27 CA COPYRIGHT 2002 ACS
AN 134:233649 CA
TI Pulse Radiolytic Studies of Metallotexaphyrins in the Presence of Oxygen: Relevance of the Equilibrium with Superoxide Anion to the Mechanism of Action of the ***Radiation*** Sensitizer Motexafin Gadolinium (Gd-Tex2+, Xcytrin)
AU ***Sessler, Jonathan L.*** ; Tvermoes, Nicolai A.; Guldi, Dirk M.; Hug,

Gordon L.; Mody, Tarak D.; Magda, Darren
CS Department of Chemistry and Biochemistry, University of Texas, Austin, TX, 78712, USA
SO Journal of Physical Chemistry B (2001), 105(7), 1452-1457
CODEN: JPCBFK; ISSN: 1089-5647
PB American Chemical Society
DT Journal
LA English
AB Pulse radiolytic studies of aq. solns. of 4 representative metallotexaphyrin complexes M-Tex2+ (M = Gd(III), Lu(III), Dy(III), and Y(III)), carried out in the presence of either dioxygen, or trimethyl-p-benzoquinone (TMQ). All 4 of these M-Tex2+ species set up an equil. with superoxide and the singly reduced TMQ (TMQ.bul.-) on the pulse radiolytic time scale. Rate consts. for the forward (k1) and back (k-1) reactions of Gd-Tex2+ with superoxide anions, at pH 8.5, were detd. to be 9.8 .times. 106 M-1 s-1 and 3.4 .times. 106 M-1 s-1, resp. For reaction with TMQ.bul.-, the analogous rate consts. were found to be 1.5 .times. 107 M-1 s-1 and 3.7 .times. 106 M-1 s-1, resp. Equil. consts. (Kkin), calcd. from these kinetic parameters, were 2.9 and 4.1 for Gd-Tex2+ reacting with O2.bul.- (to produce Gd-Tex.bul.+ and O2) and TMQ.bul.- (to produce Gd-Tex.bul.+ and TMQ), resp. Equil. consts. for the M-Tex2+ species reacting with O2.bul.- and TMQ.bul.- were also detd. from anal. of the absorption following establishment of the equil. The resulting values for Gd-Tex2+ were found to be 6.8 and 10.7, resp. From these equil. consts., the redox potential for the M-Tex2+/M-Tex.bul.+ couples at pH 8.5 were estd. to be ca. -110 mV vs NHE in the case of Gd-Tex2+.
RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 6 OF 27 CA COPYRIGHT 2002 ACS
AN 133:234470 CA
TI Expanded porphyrins. Synthetic materials with potential medical utility
AU ***Sessler, Jonathan L.*** ; Tvermoes, Nicolai A.; Davis, Julian; Anzenbacher, Pavel, Jr.; Jursikov, Karolina; Sato, Wataru; Seidel, Daniel; Lynch, Vincent; Black, Chris B.; Try, Andrew; Andrioletti, Bruno; Hemmi, Greg; Mody, Tarak D.; Magda, Darren J.; Kral, Vladimir
CS Dep. Chem. & Biochem., Inst. Cellular Mol. Biol., The Univ. Texas at Austin, Austin, TX, 78712, USA
SO Pure and Applied Chemistry (1999), 71(11), 2009-2018
CODEN: PACHAS; ISSN: 0033-4545
PB Blackwell Science Ltd.
DT Journal; General Review
LA English

AB A review with 40 refs. A no. of arom. and nonarom. expanded porphyrins have been prepd. in the authors' labs. These are allowing a no. of important themes to be explored, including the construction of novel cation- and anion-complexing agents and the generations of drug candidates with considerable therapeutic potential. In this paper, the use of gadolinium (III) and lutetium (III) texaphyrin derivs. as, resp., adjuvants for X-ray ***radiation*** cancer therapy and photosensitizers for use in photodynamic treatments of cancer, atheromatous plaque, and age-related macular degeneration will be reviewed. Also discussed are the use of water sol. sapphyrins as potential fluorescent phosphate sensors and org. sol. 2,3-dipyrrylquinoxaline derivs. as possible fluoride anion signaling agents. Recent synthetic work, designed to produce expanded porphyrins with new shapes and novel topologies, is also summarized.

RE.CNT 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 7 OF 27 CA COPYRIGHT 2002 ACS

AN 132:248011 CA

TI Texaphyrins. New drugs with diverse clinical applications in ***radiation*** and photodynamic therapy

AU ***Sessler, J. L.*** ; Miller, R. A.

CS Department of Chemistry & Biochemistry, University of Texas, Austin, TX, USA

SO Biochemical Pharmacology (2000), 59(7), 733-739
CODEN: BCPCA6; ISSN: 0006-2952

PB Elsevier Science Inc.

DT Journal; General Review

LA English

AB A review with 42 refs. The texaphyrins are quintessential metal-coordinating expanded porphyrins constitute a new series of synthetic porphyrin analogs that show promise as drugs for use in a range of medical therapies. Currently, two different water-solubilized lanthanide(III) texaphyrin complexes, namely the gadolinium(III) and lutetium(III) derivs. 1 and 2 (Gd-Tex and Lu-Tex, resp.), are being tested clin. The first of these, XCYTRIN, is in a pivotal Phase III clin. trial as a potential enhancer of ***radiation*** therapy for patients with metastatic cancers to the brain receiving whole brain ***radiation*** therapy. The second, in various formulations, is being tested as a photosensitizer for use in: (i) the photodynamic treatment of recurrent breast cancer LUTRIN; Phase II clin. trials complete, (ii) photoangioplastic redn. of atherosclerosis involving peripheral arteries ANTRIN; now in Phase II testing, and (iii) light-based treatment of

age-related macular degeneration OPTRIN; currently in Phase I clin. trials, a vision-threatening disease of the retina. Taken in concert, these two metallotexaphyrins provide a powerful new class of exptl. drugs whose diverse potential utility is abetted by a combination of well-optimized phys. features, favorable tissue biolocalization characteristics, and novel mechanisms of action. Interestingly, these mechanisms may alter conventional wisdom regarding mechanisms of ***radiation*** therapy and the pathophysiol. of atherosclerosis.
RE.CNT 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 8 OF 27 CA COPYRIGHT 2002 ACS
AN 132:233602 CA
TI Porphyrin- and expanded porphyrin-based diagnostic and therapeutic agents
AU Mody, Tarak D.; ***Sessler, Jonathan L.***
CS Pharmacyclics Inc., Sunnyvale, CA, 94086, USA
SO Perspectives in Supramolecular Chemistry (1999), 4(Supramolecular Materials and Technologies), 245-294
CODEN: PSCHFN; ISSN: 1521-1525
PB John Wiley & Sons Ltd.
DT Journal; General Review
LA English
AB A review with 321 refs. on texaphyrins as tumor-selective MRI enhancing agents and photodynamic and X-ray ***radiation*** therapy sensitizers.
RE.CNT 324 THERE ARE 324 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 9 OF 27 CA COPYRIGHT 2002 ACS
AN 132:148540 CA
TI In vivo animal studies with gadolinium(III) texaphyrin as a ***radiation*** enhancer
AU Miller, R. A.; Woodburn, K.; Fan, Q.; Renschler, M. F.; ***Sessler, J.*** *** L.*** ; Koutcher, J. A.
CS Pharmacyclics, Inc., Sunnyvale, CA, USA
SO International Journal of Radiation Oncology, Biology, Physics (1999), 45(4), 981-989
CODEN: IOBPD3; ISSN: 0360-3016
PB Elsevier Science Inc.
DT Journal
LA English
AB Gd texaphyrin (Gd-Tex, PCI-0120) is an expanded porphyrin that has demonstrated ***radiation*** enhancement. In this study, the authors evaluated the ***radiation*** enhancement and biolocalization of

Gd-Tex in 3 animal tumor models.Methods and. EMT6, SMT-F, and MCa tumors were established i.m. or s.c. Gd-Tex and other metallotexaphyrins were administered prior to single or multiple fractions of ***radiation*** . 14C-labeled Gd-Tex was used for biolocalization studies. Gd-Tex, in combination with ***radiation*** , produced significant tumor growth delay compared to irradiated control groups in both single and multifraction ***radiation*** studies. Gd-Tex ***radiation*** enhancement was obsd. only when the drug was given before, but not after irradn. Several metallotexaphyrins, identical except for the metal ion, were studied in the EMT6 tumor model including Gd, Lu, Eu, Y, and Cd texaphyrin complexes. Only Gd-Tex produced ***radiation*** enhancement. Biodistribution studies using 14C-labeled Gd-Tex demonstrated drug selectivity and retention in tumors growing i.m. compared to uninvolved muscle and plasma. Gd-Tex produces reproducible ***radiation*** enhancement in a variety of in vivo tumor models. This drug's unique radiochem., tumor selectivity, and in vivo activity suggests possible mechanisms of action not addressed by in vitro assay methods.

RE.CNT 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 10 OF 27 CA COPYRIGHT 2002 ACS
AN 132:29966 CA
TI Texaphyrin-chemotherapeutic conjugates and their pharmaceutical formulations for chemotherapy, ***radiation*** sensitization, photodynamic therapy, sonodynamic therapy, and as antiatherosclerotics
IN ***Sessler, Jonathan L.*** ; Magda, Darren; Mody, Tarak; Anzenbacher, Pavel; Carvalho, Joan
PA Board of Regents, the University of Texas System, USA; Pharmacyclics, Inc.
SO PCT Int. Appl., 88 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9962551	A1	19991209	WO 1999-US12614	19990604

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK,

ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
AU 9942321 A1 19991220 AU 1999-42321 19990604
EP 1082138 A1 20010314 EP 1999-926172 19990604
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI
US 6207660 B1 20010327 US 1999-325890 19990604
JP 2002516878 T2 20020611 JP 2000-551806 19990604
NO 2000006155 A 20010202 NO 2000-6155 20001204
PRAI US 1998-88214P P 19980605
WO 1999-US12614 W 19990604
OS MARPAT 132:29966
AB Provided are texaphyrin-chemotherapeutic drug conjugates, optionally including a Pt(II) or Pt(IV) metal chelating site and/or complex, which are useful for treating atheroma, tumors and other neoplastic tissue, neovascular-related diseases, as well as other conditions that are typically responsive to chemotherapy, ***radiation*** sensitization, photodynamic therapy, and sonodynamic therapy. Preferred chemotherapeutic agents may be selected from a taxoid, a nucleotide, an antibiotic, or a platinum coordination complex, or more specifically, selected from bleomycin, doxorubicin, taxol, taxotere, etoposide, 4-hydroxycyclophosphamide, 5-fluorocil, cisplatin, or cisplatin analogs. The texaphyrin-chemotherapeutic agents are represented by formulas Iz+ or II (Z = 0-5, M = H, di- or trivalent metal cation, R1-R4 and R6-R9 = H, halo (but not iodo), OH, alkyl, alkenyl, aryl, catalytic group, chemotherapeutic agent, Pt chelating site, etc., R5 and R10-R12 = H, alkyl, alkenyl, aryl, halo (but not iodo), hydroxyalkyl, etc., with provisos concerning their steric size relative to other R groups) their pharmaceutical salts and formulations (1 example). Example conjugates show cytotoxic activity.
RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 11 OF 27 CA COPYRIGHT 2002 ACS
AN 131:294770 CA
TI Texaphyrins having pendants containing imidazole as ***radiation*** sensitizers
IN ***Sessler, Jonathan L.*** ; Hemmi, Gregory W.; Mody, Tarak D.; Magda, Darren; Kral, Vladimir A.
PA Board of Regents, the University of Texas System, USA; Pharmacyclics, Inc.
SO U.S., 46 pp., Cont.-in-part of U. S. Ser. No. 437,968.
CODEN: USXXAM
DT Patent

LA English
FAN.CNT 21

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5969111	A	19991019	US 1997-775261	19970204
US 5559207	A	19960924	US 1994-227370	19940414
WO 9429316	A2	19941222	WO 1994-US6284	19940609
WO 9429316	A3	19950202		

W: AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, GE, HU, JP, KG, KP, KR, KZ, LK, LU, LV, MD, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, US, US, UZ, VN
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

WO 9510307	A1	19950420	WO 1994-US11491	19941012

W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LT, LU, LV, MD, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, US, UZ, VN
RW: KE, MW, SD, SZ, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

US 5622946	A	19970422	US 1995-437968	19950510

PRAI US 1994-227370 A2 19940414
WO 1994-US6284 A1 19940609
WO 1994-US11491 A1 19941012
US 1995-437968 A2 19950510
US 1995-452261 B2 19950526
US 1989-320293 A3 19890306
US 1990-539975 A2 19900618
US 1991-771393 B2 19910930
US 1992-822964 A2 19920121
US 1993-75123 B2 19930609
US 1993-135118 A 19931012

OS MARPAT 131:294770

AB I (where each R1, R2, R3, R4, R7 and R8 is independently H, OH, alkyl, hydroxyalkyl, oxyalkyl, oxyhydroxyalkyl, saccharide, oxyaminoalkyl, carboxy, carboxyalkyl, carboxyamidealkyl, a site-directing mol., imidazole or a couple to a site-directing mol. or to imidazole) as their transition metal and rare earth complexes are claimed and can be used as ***radiation*** sensitizers for human carcinoma cells. For example, the Gd and Lu complexes of I (R1 = CH2CH2CH2OH, R2 = R3 = Et, R4 = Me, R7 = R8 = OCH2HC2OCH2CH2OCH2CH2OMe) were prepd. and the ***radiation*** sensitization of HT-29 cells by these complexes was studied.

RE.CNT 177 THERE ARE 177 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 12 OF 27 CA COPYRIGHT 2002 ACS
AN 131:222611 CA
TI Preparation of highly boronated derivatives of expanded porphyrins (texaphyrins) for potential use in boron neutron capture therapy and related applications
IN ***Sessler, Jonathan L.*** ; Allen, William E.; Kral, Vladimir A.
PA USA
SO U.S., 16 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5955586	A	19990921	US 1997-821272	19970320

PRAI US 1996-13872P P 19960322
OS MARPAT 131:222611
AB The present invention is directed to highly boronated derivs. of expanded porphyrins, and more particularly to expanded porphyrins substituted with carborane clusters, e.g., gadolinium texaphyrin o-carborane deriv. I. Highly boronated texaphyrin derivs. are claimed, and discussions include highly boronated sapphyrin derivs. as well. The carborane-substituted texaphyrins may be metalated with Y(III), Lu(III), Gd(III), Eu(III), Dy(III), and Tb(III). Such compns. are potentially useful in boron neutron capture therapy, ***radiation*** therapy, photodynamic therapy, and other applications.
RE.CNT 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 13 OF 27 CA COPYRIGHT 2002 ACS
AN 130:264132 CA
TI ***Radiation*** sensitization using texaphyrins
IN ***Sessler, Jonathan L.*** ; Harriman, Anthony; Miller, Richard A.; Magda, Darren; Mody, Tarak D.; Hemmi, Gregory W.
PA Pharmacyclics, Inc., USA; Board of Regents, the University of Texas System
SO U.S., 43 pp., Cont.-in-part of U.S. 5,622,946.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 21

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI	US 5888997	A	19990330	US 1997-795393 19970204
	US 5559207	A	19960924	US 1994-227370 19940414
	US 5622946	A	19970422	US 1995-437968 19950510
	US 6072038	A	20000606	US 1998-104870 19980625

PRAI US 1994-227370 A2 19940414
US 1995-437968 A2 19950510
US 1995-452261 B2 19950526
US 1989-320293 A3 19890306
US 1990-539975 A2 19900618
US 1991-771393 B2 19910930
US 1992-822964 A2 19920121
US 1993-75123 B2 19930609
US 1993-135118 A2 19931012
US 1995-227370 A2 19940414
WO 1994-US6284 A1 19940609
WO 1994-US11491 A1 19941012
US 1997-795393 A1 19970204

OS MARPAT 130:264132

AB The invention relates to the field of ***radiation*** sensitizers and the use of texaphyrins for ***radiation*** sensitization and other conditions for which X-ray ***radiation*** has proven to be therapeutic.

RE.CNT 65 THERE ARE 65 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 14 OF 27 CA COPYRIGHT 2002 ACS

AN 130:244277 CA

TI One-Electron Reduction and Oxidation Studies of the ***Radiation*** Sensitizer Gadolinium(III) Texaphyrin (PCI-0120) and Other Water Soluble Metallotexaphyrins

AU ***Sessler, Jonathan L.*** ; Tvermoes, Nicolai A.; Guldi, Dirk M.; Mody, Tarak D.; Allen, William E.

CS Department of Chemistry and Biochemistry, University of Texas at Austin, Austin, TX, 78712, USA

SO Journal of Physical Chemistry A (1999), 103(7), 787-794
CODEN: JPCAFH; ISSN: 1089-5639

PB American Chemical Society

DT Journal

LA English

AB The ***radiation*** sensitizer gadolinium(III) texaphyrin (XYTRIN; PCI-0120; Gd-Tex2+) and several other water sol. metallotexaphyrin complexes were prepd. and studied using pulse radiolysis. All of the

metallotexaphyrins were found to react with solvated electrons and hydroxyl radicals, yielding the corresponding one-electron reduced and oxidized metallotexaphyrins, resp. The rates of the redn. processes range from 3.7 .times. 1010 to 6.8 .times. 1010 M-1-s-1 (.+-.10%), while those involving oxidn. range from 2.5 .times. 109 to 7.4 .times. 109 M-1-s-1 (.+-.10%). The spectral characteristics of the transformed metallotexaphyrins produced by these reactions, e.g., a broad absorption band with a .lambda.max centered around 830 nm, are consistent with ligand-centered redox processes. Reaction of the metallotexaphyrins with solvated electrons affords species which exhibit metal dependent behavior. In the absence of hydroxyl radicals, the decay of the reduced metallotexaphyrins produced by reaction with electrons involves an initial protonation event followed by either a dimerization process or a disproportionation step. These latter transformations are followed by a second protonation event.

RE.CNT 61 THERE ARE 61 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 15 OF 27 CA COPYRIGHT 2002 ACS
AN 126:327558 CA
TI ***Radiation*** sensitization using texaphyrins for treatment of neoplasms or atheromas
IN ***Sessler, Jonathan L.*** ; Harriman, Anthony M.; Miller, Richard A.
PA Pharmacyclics, Inc., USA; Board of Regents, Univ. of Tex. Sys.
SO U.S., 39 pp., Cont.-in-part of U.S. 5,457,183.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 21

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5622946	A	19970422	US 1995-437968	19950510
US 5457183	A	19951010	US 1993-135118	19931012
US 5583220	A	19961210	US 1995-449681	19950524
US 5580543	A	19961203	US 1995-458267	19950602
US 5587371	A	19961224	US 1995-458909	19950602
US 5632970	A	19970527	US 1995-486967	19950607
US 5801229	A	19980901	US 1996-713701	19960913
US 5888997	A	19990330	US 1997-795393	19970204
US 5969111	A	19991019	US 1997-775261	19970204
US 6069140	A	20000530	US 1997-970864	19971114
US 6072038	A	20000606	US 1998-104870	19980625
PRAI US 1993-135118	A2	19931012		

US 1989-320293 A3 19890306
US 1990-539975 A2 19900618
US 1991-771393 B2 19910930
US 1992-822064 A2 19920121
US 1992-822964 A2 19920121
US 1993-75123 B2 19930609
US 1993-98514 A1 19930728
US 1994-227370 A2 19940414
US 1995-227370 A2 19940414
WO 1994-US6284 A1 19940609
WO 1994-US11491 A1 19941012
US 1995-437968 A3 19950510
US 1995-452261 B2 19950526
US 1996-679162 A2 19960710
US 1996-713701 A1 19960913
US 1997-795393 A1 19970204

OS MARPAT 126:327558

AB Texaphyrins are provided for use as ***radiation*** sensitizers. Advantageous properties of texaphyrins for use as a ***radiation*** sensitizer include: (1) a low redox potential, which allows ***radiation*** -induced hydrated electrons to flow to texaphyrin rather than neutralizing hydroxyl radicals, allowing hydroxyl radicals to cause cellular damage; (2) a relatively stable texaphyrin radical that reacts readily to covalently modify neighboring mols., causing further cellular damage; (3) intrinsic biolocalization; and (4) indifference to the presence or absence of O2. These properties allow texaphyrins to be particularly effective for treating the hypoxic areas of solid neoplasms. Methods of treatment for an individual having a neoplasm or atheroma include the use of a texaphyrin as a ***radiation*** sensitizer and as an agent for photodynamic tumor therapy, or the use of a texaphyrin for internal and for external ionizing ***radiation*** . Novel texaphyrins are provided.

L3 ANSWER 16 OF 27 CA COPYRIGHT 2002 ACS

AN 126:199378 CA

TI Solution phase and single-crystal diffraction x-ray analyses of diprotonated porphyrin isomers - etioporphyrin, etioporphycene, and etiocorrphycene bishydroperchlorate salts

AU ***Sessler, Jonathan L.*** ; Brucker, Eric A.; Lynch, Vincent; Choe, Michael; Sorey, Steven; Vogel, Emanuel

CS Dep.of Chemistry and Biochemistry, The University of Texas at Austin, Austin, TX, 78712, USA

SO Chemistry--A European Journal (1996), 2(12), 1527-1532 Published in:

Angew. Chem., Int. Ed. Engl., 35(23/24)
CODEN: CEUJED; ISSN: 0947-6539
PB VCH
DT Journal
LA English
AB The diprotonated, bishydroperchlorate forms of three isomeric .beta.-octaalkyl-substituted tetrapyrrolic macrocycles, namely, etioporphyrin II (I), etioporphycene (II), and etiocorrphycene (III), have been characterized both in chloroform soln., by UV/visible spectroscopy and 1H and proton-correlated 2D 15N NMR methods, and in the solid state, by single-crystal x-ray diffraction analyses. In the solid state, in marked contradistinction to what is obsd. for the corresponding free-base forms, the macrocyclic portion of these salts were found to be distorted significantly from planarity with the two perchlorate counteranions being held above and below the av. N4 plane by N-H.cntdot..cntdot..cntdot.O hydrogen bonds in all three cases. In soln., 1H and proton-correlated 2D 15N NMR expts. reveal mol. ions of relatively high symmetry [D2h, D2h, and C2v in the case of I.cntdot.(HClO4)2, II.cntdot.(HClO4)2, and III.cntdot.(HClO4)2, resp.] as would by anticipated on the basis of the solid-state results. These same NMR analyses, while revealing slight differences between the three salts in the NH and meso 1H NMR spectral regions, also serve to confirm the generalized congeneric nature of I.cntdot.(HClO4)2, II.cntdot.(HClO4)2, and III.cntdot.(HClO4)2 and support the assignment of the latter two species as being porphyrin-like salts. UV/vis analyses further support this conclusion; in all three instances, strong Soret- and Q-like transitions are obsd. in dichloromethane that are both distinct from each other (.lambda.max = 404, 549, 570, 593; 388, 409, 599, 666; and 419, 559, 604 for I.cntdot.(HClO4)2, II.cntdot.(HClO4)2, and III.cntdot.(HClO4)2, resp.) and from those of the corresponding free-base forms (.lambda.max = 396, 496, 530, 565, 619; 382, 570, 617, 657; and 410, 509, 539, 574, 628 for I, II, and III resp.). Protonation expts. were carried out by exposing dichloromethane solns. of the isomers to aq. perchlorate/perchloric acid solns. of differing pH. These studies reveal that while porphycene II adds two protons readily and concurrently, becoming 50% diprotonated when exposed to perchlorate/perchloric solns. with a pH of around 3.6, porphyrin I and corrphycene III are protonated in a stepwise manner; they become 50% monoprotonated when exposed to perchlorate/perchloric solns. of pH .apprxeq. 3.7 and 3.9, resp., and diprotonated at pH .ltoreq. 0.8 and 1.3, resp.

L3 ANSWER 17 OF 27 CA COPYRIGHT 2002 ACS
AN 126:165788 CA
TI Texaphyrin metal complexes having improved functionalization

IN ***Sessler, Jonathan L.*** ; Mody, Tarak D.; Hemmi, Gregory W.
PA University of Texas, USA; Pharmacyclics, Inc.
SO U.S., 32 pp., Cont.-in-part of U.S. Ser. No. 98, 514.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 21

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5599923	A	19970204	US 1994-196964	19940215
US 4935498	A	19900619	US 1989-320293	19890306
US 5162509	A	19921110	US 1990-539975	19900618
US 5252720	A	19931012	US 1992-822964	19920121
US 5569759	A	19961029	US 1993-98514	19930728
US 5457183	A	19951010	US 1993-135118	19931012
CA 2182960	AA	19950817	CA 1995-2182960	19950215
WO 9521845	A1	19950817	WO 1995-US1996	19950215
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, UG				
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9519217	A1	19950829	AU 1995-19217	19950215
AU 688008	B2	19980305		
EP 745085	A1	19961204	EP 1995-911776	19950215
EP 745085	B1	20020522		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
JP 10500659	T2	19980120	JP 1995-521434	19950215
US 5599928	A	19970204	US 1995-459333	19950602
US 5733903	A	19980331	US 1996-679162	19960710
NO 9603396	A	19961014	NO 1996-3396	19960814

PRAI US 1989-320293 A3 19890306
US 1990-539975 A2 19900618
US 1991-771393 B2 19910930
US 1992-822964 A2 19920121
US 1993-98514 A2 19930728
US 1993-135118 A2 19931012
US 1993-75123 B2 19930609
US 1994-196964 A 19940215
WO 1995-US1996 W 19950215
OS MARPAT 126:165788

AB Texaphyrin metal complexes I [M = H, divalent, trivalent cation; R1-R4, R6-R9 = H, halide, (un)substituted alkyl, aryl, NO2, acyl, (un)substituted CO2H, sapphyrin, linker-bonded sapphyrin; R5, R10-R12 = H, (un)substituted alkyl, aryl; n = .ltoreq.5], having improved functionalization including electron donating groups at positions 12, 15, 18 and/or 21 and/or the electron withdrawing groups at positions 15 or 18 are claimed. Electron donating groups contribute electrons to the arom. .pi. system of the macrocycle which stabilizes the metal complex to demetalation and the imine bonds to hydrolysis, making these texaphyrin metal complexes useful for localization, magnetic resonance imaging, radiosensitization, ***radiation*** therapy, fluorescence imaging, photodynamic tumor therapy and applications requiring singlet oxygen prodn. for cytotoxicity. Electron withdrawing groups at positions 15 or 18 render the macrocycle more readily reduced, i.e. the redox potential is lower and the macrocycle more readily gains an electron to form a radical. Such texaphyrins having a low redox potential are useful for radiosensitization applications. The prepn. of an intermediate bis(pyrrolylmethyl)pyrrole is reported.

L3 ANSWER 18 OF 27 CA COPYRIGHT 2002 ACS
AN 126:154555 CA
TI Texaphyrin complexes having improved functionalization
IN Hemmi, Gregory W.; ***Sessler, Jonathan L.*** ; Mody, Tarak D.
PA Pharmacyclics, Inc., USA; Board of Regents, the University of Texas System
SO U.S., 30 pp., Cont. of U.S. Ser. No. 459,333.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 21

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5591422	A	19970107	US 1995-468209	19950606
US 5599928	A	19970204	US 1995-459333	19950602

PRAI US 1995-459333 A1 19950602
US 1994-196964 A2 19940215

AB Texaphyrin metal complexes having improved functionalization include the addn. of electron-donating groups to positions 2, 7, 12, 15, 18 and/or 21 and/or the addn. of electron-withdrawing groups to positions 15 and/or 18 of the macrocycle. Electron-donating groups at positions 2, 7, 12, 15, 18 and/or 21 contribute electrons to the arom. .pi. system of the macrocycle which stabilizes the metal complex to demetallation and the imine bonds to hydrolysis. These texaphyrin metal complexes having enhanced stability are useful for localization, radiosensitization and ***radiation*** therapy. Electron-withdrawing groups at positions 15 and/or 18 render the